



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,645	03/07/2001	Troy Michael Runge	16,670	5221
23556 7590 01/18/2007 KIMBERLY-CLARK WORLDWIDE, INC. 401 NORTH LAKE STREET NEENAH, WI 54956			EXAMINER HALPERN, MARK	
			ART UNIT 1731	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/18/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Kimberly-Clark.Docket@kcc.com
catherine.wolf@kcc.com

Office Action Summary

Application No.

09/800,645

Applicant(s)

RUNGE ET AL.

Examiner

Mark Halpern

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-19,22-33 and 77-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-19,22-33 and 77-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

- 1) Acknowledgement is made of Response received 10/27/2006.

Claims 1-6, 8-19, 22-33, 77-79 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 2) Claims 1-2, 4-5, 8-19, 22-23, 25, 27-33, 77-79, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hansen (5,547,541) with or without Saint-Cyr, (Adsorption Kinetics of Dyes and Yellowing Inhibitors on Pulp Fibers, Master of Engineering Thesis, McGill University, Montreal, Canada, June 1999)

Claims 1-2, 4-5, 14, 17-18, 22-23, 25, 27: Hansen discloses sequentially spraying a non-polymeric or polymeric binder and water insoluble superabsorbent onto the surface of a dewatered and dried web as shown in a paper machine in Figure 1 and disclose chemicals listed in columns 19-20. The treated sheet is then fiberized to form absorbent non-woven products. The sprayed additives in Hansen are chemically bound to the fibers by covalent or ionic bonds and are inherently retained in the claimed range between about 10% to about 100% in the sheet when exposed to a liquid, water, and thus anticipate or it would have been obvious, to one skilled in the art at the time the invention was made, show the claimed invention. The present Specification (Background of the Invention, Pgs. 1-2) discloses adsorption of chemical additives by a web onto web fibers and discloses that the adsorption follows Langmuir kinetics. The Specification also recites that "...the adsorption of water soluble or water dispersible chemical additives may be significantly less than 100 percent,...". Saint-Cyr performed surface adsorption tests finding that chemical adsorption on the surface of fibers is following Langmuir kinetics. Saint-Cyr further performed desorption tests by taking the web containing chemical additives adsorbed by the web fibers and placing said web in water and concluded that adsorption is irreversible (Saint-Cyr, Section 4.2, pg. 45, Section 4.2, pg. 83). Desorption does not follow Langmuir kinetics. Langmuir kinetics assumes that adsorption is reversible. Desorption is following Donnan equilibrium (Conclusions, pgs. 55-58, pgs. 95-98, pgs. 102-103), desorption being irreversible due to ionic bonding between the chemical additive and fibers. The tests of Saint-Cyr thus support the concept that the sprayed additives are chemically bound to

the fibers by covalent or ionic bonds and are inherently retained by the fibers when exposed to a liquid.

Claims 8-13, 33: the chemical additives are softening agents (Abstract).

Polyhydroxy compounds are disclosed (col. 27, lines 35-50). Absorbency agents are disclosed (col. 42, lines 14-20). Strength agents are disclosed (col. 42, lines 46-52).

Claims 15, 29-32, 77-79: the amount of chemical additive is disclosed in the Examples.

Claims 16-17: dried fiber consistency is disclosed between 90 and 92 percent (col. 8, lines 35-45).

Claim 19; tissue forming is disclosed (col. 35, lines 19-32).

Claim 28: paper product enhanced quality is disclosed (Abstract).

3) Claims 3, 6, 24, 26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Champaigne (3,556,931). Hansen is applied as above for claims 1, 22, Hansen is silent on a z-direction gradient of the chemical additive. Champaigne discloses a process of making a cellulosic fluffed sheet, wherein a quaternary ammonium salt is added to the web in such a way as to penetrate only the surface zone of the web and thus create a gradient of chemical additive penetration into the web (Champaigne, col. 1, lines 13-27, and col. 1, line 64 to col. 2, line 19). It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Hansen and Champaigne, because such a combination would create a product of Hansen having a dense absorbent inner zone and a softer more fluid outer zone, as disclosed by Champaigne (col. 1, lines 25-27).

Response to Amendment

4) The terminal disclaimer filed on 7/28/2005, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of patent resulting from application 10/242,571 has been reviewed and is accepted. The terminal disclaimer has been recorded.

5) Applicant's arguments filed 10/27/2006, have been fully considered but they are not persuasive.

Applicants allege that the cited prior art, Hansen, in col. 12, lines 36-43, discloses that upon dissolving in aqueous liquids, such as urine, fibers no longer retain a chemical additive on a fiber surface.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., dissolving of chemically treated fibers in urine) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The present invention recites the dispersing of the chemically treated pulp fibers of the chemically treated dried fibrous web in water.

Applicants allege that Hansen and Saint-Cyr do not disclose the invention.

Applicants do not explain why the teachings of Hansen and Saint-Cyr do not disclose the invention. Saint-Cyr supports Hansen. Saint-Cyr performed surface adsorption tests finding that chemical adsorption on the surface of fibers is following Langmuir kinetics. Saint-Cyr further performed desorption tests by taking the web

containing chemical additives adsorbed by the web fibers and placing said web in water and concluded that adsorption is irreversible. Desorption does not follow Langmuir kinetics. Langmuir kinetics assumes that adsorption is reversible. Desorption is following Donnan equilibrium, desorption being irreversible due to ionic bonding between the chemical additive and fibers. The tests of Saint-Cyr thus support the concept that the sprayed additives are chemically bound to the fibers by covalent or ionic bonds and are inherently retained by the fibers when exposed to a liquid.

Resolution of the dependent claims is based on the resolution of the independent claims.

Conclusion

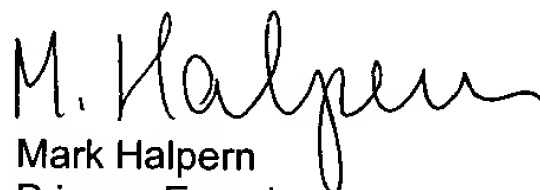
6) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 571-272-1190. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mark Halpern
Primary Examiner
Art Unit 1731